

Molecules and other substances can be attached to a material to be electroprocessed by any technique known in the art.

Another embodiment of matrix materials that have a therapeutic effect is electroprocessed fibrin. Fibrin matrix material assists in arrest of bleeding.

5 Fibrin is a component of the provisional matrix that is laid down during the early stages of healing and may also promote the growth of vasculature in adjacent regions, and in many other ways is a natural healing promoter. Fibrinogen as an electroprocessed material can also assist in healing. When placed in contact with
10 a wound, for example, fibrinogen will react with thrombin present in the blood plasma from the wound and form fibrin, thereby providing the same healing properties of a fibrin material.

Substances

As discussed above, the word "substance" in the present invention is used
15 in its broadest definition. In embodiments in which the compositions of the present invention comprise one or more substances, substances can include any type or size of molecules, cells, objects or combinations thereof. The compositions of the present invention may comprise one substance or any combination of substances.

20 In embodiments in which the substances are molecules, any molecule can be used. Molecules may, for example, be organic or inorganic and may be in a solid, semisolid, liquid, or gas phase. Molecules may be present in combinations or mixtures with other molecules, and may be in solution, suspension, or any other form. Examples of classes of molecules that may be used include human or
25 veterinary therapeutics, cosmetics, nutraceuticals, agriculturals such as herbicides, pesticides and fertilizers, vitamins, amino acids, peptides, polypeptides, proteins, carbohydrates, lipids, nucleic acids, glycoproteins, lipoproteins, glycolipids, glycosaminoglycans, proteoglycans, growth factors, hormones, neurotransmitters, pheromones, chalcones, prostaglandins,
30 immunoglobulins, monokines and other cytokines, humectants, metals, gases, minerals, ions, electrically and magnetically reactive materials, light sensitive materials, anti-oxidants, molecules that may be metabolized as a source of cellular energy, antigens, and any molecules that can cause a cellular or physiological response. Any combination of molecules can be used as well as
35 agonists or antagonists.

Some specific examples of pharmaceutical agents that are useful as substances include, but are not limited to, quinolones, such as oxolinic acid, norfloxacin, and nalidixic acid, sulfonamides, nonoxynol 9, fusidic acid, cephalosporins, cyclosporine, acebutolol, acetylcysteine, acetylsalicylic acid, 5 acyclovir, AZT, alprazolam, alfalcidol, allantoin, allopurinol, ambroxol, amikacin, amiloride, aminoacetic acid, aminodarone, amitriptyline, amlodipine, ascorbic acid, aspartame, astemizole, atenolol, benserazide, benzalkonium hydrochloride, benzoic acid, bezafibrate, biotin, biperiden, bisoprolol, bromazepam, bromhexine, bromocriptine, budesonide, bufexamac, buflomedil, 10 buspirone, caffeine, camphor, captopril, carbamazepine, carbidopa, carboplatin, cefachlor, cefalexin, cefatroxil, cefazolin, cefixime, cefotaxime, ceftazidime, ceftriaxone, cefuroxime, selegiline, chloramphenicol, chlorpheniramine, chlortalidone, choline, cilastatin, cimetidine, cisapride, cisplatin, clarithromycin, clavulanic acid, clomipramine, clozapine, clonazepam, clonidine, codeine, 15 cholestyramine, cromoglycic acid, cyanocobalamin, cyproterone, desogestrel, dexamethasone, dexpanthenol, dextromethorphan, dextropropoxiphen, diazepam, diclofenac, digoxin, dihydrocodeine, dihydroergotamine, dihydroergotoxin, diltiazem, diphenhydramine, dipyridamole, dipyrone, disopyramide, domperidone, dopamine, doxycycline, enalapril, ephedrine, epinephrine, 20 ergocalciferol, ergotamine, erythromycin, estradiol, ethinylestradiol, etoposide, Eucalyptus globulus, famotidine, felodipine, fenofibrate, fenoterol, fentanyl, flavin mononucleotide, fluconazole, flunarizine, fluorouracil, fluoxetine, flurbiprofen, furosemide, gallopamil, gemfibrozil, Gingko biloba, glibenclamide, glipizide, Glycyrrhiza glabra, grapefruit seed extract, grape seed extract, 25 griseofulvin, guaifenesin, haloperidol, heparin, hyaluronic acid, hydrochlorothiazide, hydrocodone, hydrocortisone, hydromorphone, ipratropium hydroxide, ibuprofen, imipenem, indomethacin, iohexol, iopamidol, isosorbide dinitrate, isosorbide mononitrate, isotretinoin, ketotifen, ketoconazole, ketoprofen, ketorolac, labetalol, lactulose, lecithin, levocarnitine, levodopa, 30 levoglutamide, levonorgestrel, levothyroxine, lidocaine, lipase, imipramine, lisinopril, loperamide, lorazepam, lovastatin, medroxyprogesterone, menthol, methotrexate, methyl dopa, methylprednisolone, metoclopramide, metoprolol, miconazole, midazolam, minocycline, minoxidil, misoprostol, morphine, N-methylephedrine, naftidrofuryl, naproxen, nicardipine, nicergoline, nicotinamide, 35 nicotine, nicotinic acid, nifedipine, nimodipine, nitrazepam, nitrendipine,